

PTO/SB/21 (09-04)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number	09/803,178
Filing Date	3/9/01
First Named Inventor	Pugh
Art Unit	2122
Examiner Name	Nguyen Ba, Hoang Vu A.
Attorney Docket Number	109870-130110

ENCLOSURES (Check all that apply)

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input checked="" type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input checked="" type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Terminal Disclaimer	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Request for Refund	Check \$500
<input type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> CD, Number of CD(s) _____	Return Receipt Postcard
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> Reply to Missing Parts/Incomplete Application	Remarks	
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Schwabe, Williamson & Wyatt, P.C.		
Signature			
Printed name	Kyle H. Flindt		
Date	3/21/05	Reg. No.	42,539

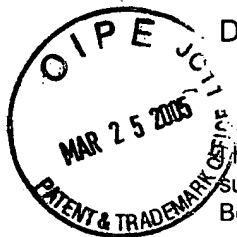
CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature			
Typed or printed name	Kyle H. Flindt	Date	3/21/05

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



Docket No.: 109870-130110

MAIL STOP: APPEAL BRIEF-PATENTS

Handwritten: AF 2122

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date indicated below.

By: *K. H. F.* Date: March 21, 2005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Before the Board of Patent Appeals and Interferences

Applic. No.	:	09/803,178	Confirmation No.:	4745
Inventor	:	William Pugh		
Filed	:	March 9, 2001		
Title	:	Multi-Version Hosting of Application Services		
Art Unit	:	2122		
Examiner	:	Hoang Vu A Nguyen Ba		
Customer No.	:	25,943		

Hon. Commissioner for Patents
Mail Stop: Appeal Brief-Patents
P.O. Box 1450
Alexandria, VA 22313-1450

BRIEF ON APPEAL

Dear Sir :

This appeal arises from a final decision by the Examiner in the Office Action, dated October 19, 2004. The final decision was in response to arguments filed on June 28, 2004, in response to an earlier office action, mailed April 26, 2004.

Appellants response, filed on December 14, 2004 under 37 CFR 1.116, to the final decision offered to cancel claims 34-37 in an effort to remove issues for appeal and to correct previously undetected grammatical informalities in claims 4, 17, 23, 24 and, 31. However, the Advisory Action dated February 3, 2005 not only refused

entry of the offered claim cancellations and claim amendments, but indicated the *sua sponte* rejection of previously allowed claims 20-33 without explanation. Appellants' attempts to clarify the potential clerical error in the Advisory Action with the Examiner have been, as yet, unsuccessful and so the related issues are also included in this Appeal.

Appellants submit this *Brief on Appeal* in triplicate, including payment in the amount of \$500.00 to cover the fee for filing the *Brief on Appeal*. Appellants respectfully request consideration of this appeal by the Board of Patent Appeals and Interferences for allowance of the present patent application.

Real Party in Interest:

This application is assigned to BEA Systems, Inc., having a principal place of business at 2315 North First Street, San Jose, California 95131. The assignment is pending recordation at the United States Patent and Trademark Office.

Related Appeals and Interferences:

To the best of Appellants' knowledge, there are no related appeals or interference proceedings currently pending, which would directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

Status of Claims:

Claims 1-16 and 20-33 are rejected and are under appeal. Claims 34-37 were cancelled. Claims 1-37 were pending and claims 1-16 and 34-37 were rejected in

the Final Office Action dated October 19, 2004. Claims 20-33 were rejected in the Advisory Action without explanation. On entry of the offered amendments and cancellations to reduce the number of issues on appeal, claims 1-33 are pending, and are reproduced, as pending, in Appendix A.

Status of Amendments:

To reduce the number of potential issues on appeal, amendments are being offered for claims 4, 17, 23, 24 and, 31 in conjunction with cancellation of claims 34-37. The offered amendments correct previously undetected grammatical informalities. Since claims 4, 17, 23, 24 and, 31 were previously pending, and no new matters are being introduced, no new searches are required, nor are new issues being raised.

An after final response (*Response under 37 CFR § 1.116*) was filed on December 14, 2004. Claims 4, 17, 23, 24 and, 31 were amended to correct previously undetected informalities and claims 34-37 were canceled after the final Office action. The cancellations and amendments were offered to reduce the number of issues on appeal. A *Notice of Appeal* was submitted on January 19, 2004. The Advisory Action dated February 3, 2005 rejected entry of the proposed amendments to claims 4, 17, 23, 24 and, 31 and rejected the offered cancellation of pending claims 34-37.

Summary of the Invention:

As stated in the first paragraph on page 1 of the specification of the instant application, the invention relates to concurrently hosting application services with multiple versions of the hosting services. Embodiments of the invention relate to an

application service provision apparatus having an application service provision runtime library with multiple versions. In addition, at least one embodiment of the invention relates to a shared resource consumer and a method of operation of the shared resource consumer. Embodiments of the invention further relate to a method of operation of an apparatus having a shared resource monitor.

Appellant explained on page 6 of the specification, line 10, that, referring now in detail to figure 1 of the drawing, there is a block diagram illustrating an overview of the present invention, including an application service provision apparatus equipped with a dispatching and a shared resource monitoring function, in accordance with one embodiment. The application service provision apparatus (108) hosts a number of application services, e.g. (116i) and (116n), on behalf of their developers. The application service provision apparatus (108) is advantageously equipped with different versions of runtime support, also referred to as the runtime library, e.g. (114i) and (114n). Clients (102a) and (102b) access these various application services, e.g. (116i) and (116n), through networking fabric (106), using various known messaging protocols (e.g. HTTP) signaled in accordance with various known communication protocols (e.g. TCP/IP).

Appellant further explained on page 7 of the specification, line 1, that the application service provision apparatus (108) includes one or more resources shared by the application services (116*) and/or the functions of the runtime library (114*), e.g. memory resource (120). The application service provision apparatus (108) is also provided with a dispatcher function (110), and a shared resource monitor function

(118) to facilitate the current support of the multiple versions of runtime library, and efficient operation of the resources. One embodiment of the dispatcher function (110) includes an associated application and runtime (RT) library version mapping cache (112) and is employed to perform the dispatching function, i.e. routing of requests for service from clients (102a-102b) to selected ones of the application services being hosted.

Appellant outlined on page 9 of the specification, starting on line 4, that, embodiments of the present invention effectuate the dispatcher function by

- loading the latest version of the runtime library (114n) at initialization of the application service provision apparatus, the latest version of the runtime library includes data associating an application with a required version of the runtime library;
- during operation, receiving by a dispatcher (110) a request for service for the application (202);
- in response, determining by the dispatcher (110) whether the required version of the runtime library used by the application is known to the dispatcher (204); and
- if the version of the runtime library required by the application is not known to the dispatcher, inquiring by the dispatcher of the latest version of the runtime library to learn of the required version of the runtime library (206).

References Cited:

U.S. Patent No. 6,332,168 (*House et al.*), dated September 28, 1995;

Issues Presented:

- I. Whether or not claims 1-16 are anticipated by *House, et al.* under 35 U.S.C. §102(e).

II. Whether or not previously allowed substantially unchanged claims 20-33 are properly rejected without fully and clearly stating the grounds of rejection.

III. Whether or not proposed cancellation of claims 34-37 are properly refused.

IV. Whether or not claims 20-33 are anticipated by *House, et al.* under 35 U.S.C. §102(e).

Grouping of Claims:

Claims 1, 7, 9, 16, 17, 20, 23, 27, 30 are independent. Claims 2-6 depend on claim 1. Claim 8 depends on claim 7. Claims 10-15 depend on claim 9. Allowed claims 18 and 19 depend on allowed claim 17. Claims 21 and 22 depend on claim 20. Claims 24-26 depend on claim 23. Claims 28 and 29 depend on claim 27. Claims 31-33 depend on claim 30. The patentability of claims 1-16 and claims 20-33 are separately argued. Therefore, claims 2-16 stand or fall with claim 1 but claims 20-33 do not fall with claim 1.

Arguments:

1. Rejection of claims 1-16 under 35 U.S.C. §102(e) was improper because *House, et al.* failed to teach each and every limitation

As discussed in detail below, *House* failed to teach at least the required limitation of **inquiring by the dispatcher of the latest version of the runtime library to learn of the required version of the runtime library** as recited in claim 1.

It is well settled that anticipation under 35 U.S.C. §102(e) requires the disclosure in a signal piece of prior art to teach **each and every** limitation of a claimed invention.

Electro Med. Sys. S.A. v. Cooper Life Sciences, 34 F.3d 1048, 1052, 32 USPQ2d

1017, 1019 (Fed. Cir. 1994). More specifically, MPEP 2131 states, "TO

ANTICIPATE A CLAIM, THE REFERENCE MUST TEACH EVERY ELEMENT OF

THE CLAIM" and "a claim is anticipated only if each and every element as set forth

in the claim is found, either expressly or inherently described, in a single prior art

reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2

USPQ2d 1051, 1053 (Fed. Cir. 1987). Thus, to anticipate the present invention,

House must disclose every element recited in the pending claims.

Claim 1 recites as follows:

1. In an application service provision apparatus having an application service provision runtime library with multiple versions, a method of operation comprising:
 - loading the latest version of the runtime library at initialization of the application service provision apparatus, the latest version of the runtime library includes data associating an application with a required version of the runtime library;
 - during operation, receiving by a dispatcher a request for service for the application;
 - in response, determining by the dispatcher whether the required version of the runtime library used by the application is known to the dispatcher; and
 - if the version of the runtime library required by the application is not known to the dispatcher, inquiring by the dispatcher of the latest version of the runtime library to learn of the required version of the runtime library.

Accordingly, to achieve the desired inquiry of the latest version of the runtime library to determine the required version of the runtime library when the version is unknown to the dispatcher, claim 1 first requires the consultation of a runtime library as to what version of the runtime library an application needs.

In contrast, *House* fails to perform this required operation. Instead, *House* teaches that the RTSS links the application program to an appropriate Run Time Library version as specified in the APDB – and to a default version if there is no specification in the APDB. See at least col. 4, lines 35-40 and Figure 3. Figures 5 through 7 teach of the RTSS 310 consulting the APDP 335 at the start of the system to obtain the description of the known runtime libraries, including LPA statements and CSA statements. The predominate balance of Figure 5 and most of Figure 6 merely describe loading the LPA language modules, building of Library Vectors and Library Vector Pointers. Figure 6 through Figure 7 show that when an application starts, the application asks the RTSS where the appropriate runtime libraries are. In response, the RTSS provides the application with the location of the appropriate runtime library (if known).

Figure 8 shows, among other things, that if the runtime library is not known by the system, the RTSS will indicate that the application should use the default library. Neither Figure 9 nor Figure 10 contain any descriptive information explaining what the process should do if the runtime library version is unknown. Nowhere in *House*, including Figures 5-10, is there a discussion or teaching of an operation "inquiring by the dispatcher of the latest version of the runtime library to learn of the required version of the runtime library."

Therefore, for at least the reasons set forth above, Appellants submit that *House* does not anticipate Claim 1 under § 102(e). As such, Appellants submit that Claim 1 is in proper form for allowance and request that the rejection be removed.

As with Claim 1, Claims 7, 9, and 16 are similarly rejected under § 102(e) as anticipated by *House*. Appellants submit that Claims 7, 9, and 16 contain limitations similar to Claim 1. Thus, for at least the reasons set forth above with respect to Claim 1, Appellants believe that Claims 7, 9, and 16 are likewise in proper form for allowance.

Claims 2-6, 8, and 10-15 depend on Claims 1, 7, and 9, respectively. Due at least in part on their dependency, Appellants submit that claims 2-6, 8, and 10-15 are likewise in proper form for allowance.

2. Rejections of claims 20-33 failed to fully and clearly state the ground of rejection or designate the *statutory basis* for any ground of rejection and was thus improper under MPEP 707.07(d)

MPEP 707.07(d) requires that "Where a claim is refused for any reason relating to the merits ... The examiner should designate the *statutory basis* for any ground of rejection by express reference to a section of 35 U.S.C. in the opening sentence of each ground of rejection." In the instant case, no *statutory basis* is provided for the rejection of previously allowed claims 20-33. Moreover, the Advisory Action only references previously rejected claim 1.

In view of the foregoing, Appellants respectfully submit that claims 20-33 are patentable over *House* as indicated by the Examiner in the final Office Action in the last paragraph on page 4 and the first paragraph on page 5.

In the alternative, Appellants respectfully urge the honorable Board to reverse the final rejection of the Primary Examiner in the Advisory Action and remand for further consideration in a first Office action on the merits of claims 20-33, so that the Appellants have opportunity to respond or clarify the subject matter included in claims 20-33.

3. Whether or not proposed amendments are properly refused, including the offered cancellation of claims 34-37.

Although MPEP 714.12 indicates that "once a final rejection ... has been entered in an application, applicant or patent owner no longer has any right to unrestricted further prosecution." This does not mean that no further amendment or argument will be considered. In fact, MPEP 714.12 clarifies that "any amendment that will place the application either in condition for allowance or in better form for appeal may be entered." In the instant case, Appellants assert that the offered amendments improve the claims as to form and reduce the number of issues on appeal. Thus the offered amendments are to be permitted after final action in accordance with 37 CFR 1.116(b) which clearly indicates that "amendments may be made canceling claims".

4. Whether or not claims 20-33 are anticipated by *House, et al.* under 35 U.S.C. §102(e).

As previously established, anticipation under 35 U.S.C. §102(e) requires that each and every element as set forth in the claim is found, either expressly or inherently

described, in a single prior art reference. Moreover, MPEP 2131 states, "to anticipate a claim, the reference must teach every element of the claim."

Appellants agree with the Examiner's statement in the last paragraph on page 4 of the final Office Action that *House* "does not teach tracking by the resource consumers, identifying points in time where the allocations of the shared resource were last used, and making available the tracked usage information requested by the resource monitor to allow the resource monitor to be able to determine which of the allocated resources are to be released."

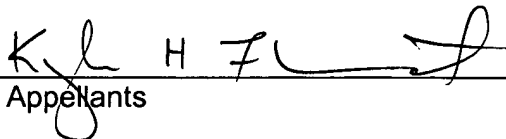
Moreover, with respect to claims 23-26 and 30-33, Appellants further agree with the Examiners statement in the first paragraph on page 5 of the final Office Action that claims are allowable "for the same reasons discussed above with respect to claims 17, 20, and 27.

In the instant case, none of the references either show or suggest the features of claims 20, 23, 27, and 30. Claims 20, 23, 27, and 30 are, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claims 20, 23, 27, and 30.

The honorable Board is therefore respectfully urged to reverse the final rejection of
the Primary Examiner.

Respectfully submitted,

Kyle H. Flindt
Reg. No. 42,539



For Appellants

KHF/cgm

Date: March 21, 2005

Schwabe Williamson & Wyatt, P.C.
1420 Fifth, Suite 3010
Seattle, WA 98101

Tel: (206) 622-1711
Fax: (206) 292-0460

Appendix A - Appealed Claims:

1. (Original): In an application service provision apparatus having an application service provision runtime library with multiple versions, a method of operation comprising:

loading the latest version of the runtime library at initialization of the application service provision apparatus, the latest version of the runtime library includes data associating an application with a required version of the runtime library;

during operation, receiving by a dispatcher a request for service for the application;

in response, determining by the dispatcher whether the required version of the runtime library used by the application is known to the dispatcher; and

if the version of the runtime library required by the application is not known to the dispatcher, inquiring by the dispatcher of the latest version of the runtime library to learn of the required version of the runtime library.

2. (Original): The method of claim 1, wherein said method further comprises the latest version of the runtime library informing the dispatcher which version of the runtime library is the required version of the runtime library, and the dispatcher caching the required version information.

3. (Original): The method of claim 2, wherein said method further comprises the dispatcher routing the request of service to the application to handle if the dispatcher is informed by the latest version of the runtime library that the required version of the runtime library is the latest version itself.

4. (Currently Amended): The method of claim 2, wherein said method further comprises the dispatcher determining whether the required version of the runtime library is loaded if the required version is an earlier version of the runtime library[[.]] and, if the required earlier version of the runtime library is not loaded, loading the required earlier version.

5. (Original): The method of claim 4, wherein said method further comprises the dispatcher routing the request of service to the application to handle if the required earlier version of the runtime library is already loaded or upon loading the required earlier version of the runtime library.

6. (Original): The method of claim 1, wherein said method further comprises the dispatcher routing the request for service to the application to handle if the required version of the runtime library is known to the dispatcher.

7. (Original): In an application service provider apparatus having an application service provision runtime library with multiple versions, a method of operation comprising:

inquiring with the latest version of the runtime library to identify the version of the runtime library required by an application whenever the required version is not known; and

in response, the latest version of the runtime library responding with the required version.

8. (Original): The method of claim 7, wherein the method further comprises loading the latest version of the runtime library at initialization of the application service provider apparatus.

9. (Previously Presented): An apparatus comprising:

storage medium having stored therein programming instructions designed to implement a dispatcher on the apparatus to:

load a pre-determined version of a runtime library with multiple versions at initialization of the apparatus, the pre-determined version being the latest version,

receive a request for service for an application during operation,

determine, in response, whether the version of the runtime library required by the application is known to the dispatcher, and

inquire with the latest version of the runtime library to learn of the required version of the runtime library if the version of the runtime library required by the application is not known to the dispatcher; and

at least one processor coupled to the storage medium to execute the programming instructions.

10. (Original): The apparatus of claim 9, wherein the dispatcher implemented by the programming instructions is further designed to receive from the latest version of the runtime library information on the required version of the runtime library, and in turn, cache the required version information.

11. (Original): The apparatus of claim 10, wherein the dispatcher implemented by the programming instructions is further designed to route the request of service to the application to handle if the dispatcher is informed by the latest version of the runtime library that the required version of the runtime library is the latest version itself.

12. (Original): The apparatus of claim 10, wherein the dispatcher implemented by the programming instructions is further designed to determine whether the required version of the runtime library is loaded if the required version is an earlier version of the runtime library, and if the required earlier version of the runtime library is not loaded, load the required earlier version.

13. (Original): The apparatus of claim 12, wherein the dispatcher implemented by the programming instructions is further designed to route the request of service to the application to handle if the required earlier version of the runtime library is already loaded or upon loading the required earlier version of the runtime library.

14. (Original): The apparatus of claim 9, wherein the dispatcher implemented by the programming instructions is further designed to route the request for service to the application to handle if the required version of the runtime library is known to the dispatcher.

15. (Original): The apparatus of claim 9, wherein the storage medium further having stored therein programming instructions to implement the plurality of versions of the runtime library.

16. (Original): An apparatus comprising:

storage medium having stored therein programming instructions designed to implement a version of an application service provision runtime library, including the ability to receive an inquiry to identify the version of the runtime library required by an application, and in response, responding with the required version; and

at least one processor coupled to the storage medium to execute the programming instructions.

17. (Previously Presented): A method comprising:

accepting by a first resource consumer, first allocations of a first plurality of portions of a shared resource, and tracking first points in time the first allocations were last used;

accepting by a second resource consumer, second allocations of a second plurality of portions of the shared resource, and tracking second points in time the second allocations were last used;

conditionally requesting by a resource monitor, the first and second resource consumers to provide said tracked first and second points in time, and the first and second resource consumers responsively providing the tracked first and second points in time as requested;

determining by the resource monitor which, if any, of the first and second allocations of the portions of the shared resource are to be released by the first and second resource consumers, and instructing the first and second resource consumers accordingly; and

releasing by the first and second resource consumers, selected ones of the first and second allocations as instructed.

18. (Original): The method of claim 17, wherein the resource monitor conditionally requests the first and second resource consumers to provide said tracked first and second points in time when aggregated allocations of the shared resource reach a pre-determined threshold.

19. (Previously Presented): The method of claim 17, wherein said determining by the resource monitor comprises ordering said provided first and second points in time, and selecting a number of the least recently used allocations to be released to bring an aggregate of the allocations to at most a predetermined threshold.

20. (Previously Presented): In an apparatus having a shared resource consumer, a method of operation of the shared resource consumer, comprising:

- accepting allocations of a plurality of portions of a shared resource;
- tracking points in time the allocations were last used;
- receiving a request to provide the tracked points in time;
- in response, providing the tracked points in time as requested;
- receiving instructions to release selected ones of the allocations; and
- releasing the specified allocations as instructed.

21. (Original): The method of claim 20, wherein the apparatus is an application service provision apparatus, and the shared resource consumer is an application requiring application service provision runtime library support.

22. (Original): The method of claim 20, wherein the apparatus is an application service provision apparatus, and the shared resource consumer is a function of an application service provision runtime library.

23. (Currently Amended): In an apparatus comprising a shared resource monitor, a method of operation of the shared resource monitor, comprising:

conditionally requesting a plurality of shared resource consumers to provide corresponding tracked plurality points in time, where corresponding plurality of portions of a shared resource allocated to the plurality of shared resource consumers were last used; and

determining which, if any, of the plurality of allocations of the portions of the shared resource are to be released by the plurality of shared resource consumers, and instructing the plurality of shared resource consumers to release selected ones of the plurality of allocations accordingly.

24. (Currently Amended): The method of claim 23, wherein said conditionally request is made when aggregate allocations of the shared resource reach a pre-determined threshold.

25. (Original): The method of claim 23, wherein said determining comprises ordering said provided plurality points in time, and selecting a sufficient number of the least recently used allocations to be released to bring the aggregate allocations to at most a predetermined threshold.

26. (Original): The method of claim 23, wherein the resource monitor is a component of an application service provision apparatus.

27. (Previously Presented): An apparatus comprising:
storage medium having stored therein a plurality of programming instructions designed to implement a shared resource consumer, including the ability to:
accept allocations of a plurality of portions of a shared resource,
track points in time the allocations were last used,
receive a request to provide the tracked points in time,
provide, in response, the tracked points in time as requested,
receive instructions to release selected ones of the allocations, and
release the specified allocations as instructed; and
at least one processor coupled to the storage medium to execute the programming instructions.

28. (Original): The apparatus of claim 27, wherein the apparatus is an application service provision apparatus, and the shared resource consumer is an application requiring application service provision runtime library support.

29. (Original): The apparatus of claim 27, wherein the apparatus is an application service provision apparatus, and the shared resource consumer is a function of an application service provision runtime library.

30. (Previously Presented): An apparatus comprising:
storage medium having stored therein a plurality of programming instructions designed to implement a shared resource monitor, including the abilities to:
conditionally request a plurality of shared resource consumers to provide corresponding tracked plurality points in time, where corresponding plurality of portions of a shared resource allocated to the plurality of shared resource consumers were last used, and

determine which if any of the plurality of allocations of the portions of the shared resource are to be released by the plurality of shared resource consumers, and instruct the plurality of shared resource consumers to release selected ones of the plurality of allocations accordingly; and at least one processor coupled to the storage medium to execute the programming instructions.

31. (Currently Amended): The apparatus of claim 30, wherein said shared resource monitor is designed to make said conditionally request when aggregate allocations of the shared resource reach a pre-determined threshold.

32. (Previously Presented): The apparatus of claim 30, wherein said shared resource monitor is designed to perform said determining by ordering said provided plurality points in time, and selecting a sufficient number of the least recently used allocations to be released to bring an aggregate of the allocations to at most a predetermined threshold.

33. (Original): The apparatus of claim 30, wherein the apparatus is an application service provision apparatus, and the resource monitor is a component of said application service provision apparatus.

Claims 34 – 37 (Canceled).